

Before discussing the rejection in detail, a brief review of the presently claimed invention may be quite instructive. The subject invention relates to a film for metallization which is composed of a polypropylene-based resin composition for metallized films. The composition comprises, among other things, a propylene random copolymer (A) produced in the presence of a metallocene catalyst, and which has the properties (a-1) to (a-6) as recited in claim 1. In addition, the film for metallization composed of a polypropylene-based resin composition of independent claim 1 satisfies a mathematical relationship between the heat seal temperature and the tensile modulus of the film as set forth in formula (a).

Such a film in accordance with the above provides a metallized film excellent in processability, stiffness, heat-sealing property, resistance to blocking and surface scratching, containing a limited quantity of solubles, and excellent in adhesion properties to the metallizing film and printability and delamination characteristics of the metallized surface. Also, with the improved stiffness and heat sealing property, the metallized films in accordance with the presently claimed invention are particularly adapted for use in wrapping food and medical products. Therefore, it is quite important that copolymer (A) satisfies all of requirements (a-1) to (a-6) and formula (a), since, even if just one of these requirements is not satisfied, the resultant film is not suitable as a surface to be metallized.

It is submitted that the subject films for metallization composed of a polypropylene-based resin composition as recited in independent claim 1 patentably distinguish over the films taught by the cited Chatterjee patent. Specifically, as was asserted in the prior Response, the subject polypropylene-based resin compositions as claimed distinguish over that taught by the cited Chatterjee patent by the recitation that the film satisfies the mathematical relationship according to formula (a) between the heat seal temperature at a specific load and tensile modulus. Further, it is urged, as in the previous Response, that it is extremely important that copolymer (A) satisfies all of requirements (a-1) to (a-6) because, if even one of requirements (a-1) to (a-6) is not satisfied, the resultant composition is not suitable as a material of a film for metallizing thereof.

It was asserted in the subject Action that the above arguments was that they were not persuasive. More particularly, it now has been asserted that (1) the compositions of resin according to the cited Chatterjee patent are substantially identical to those as claimed and (2) both the polypropylene polymer of the Chatterjee patent and the polypropylene polymer as claimed can be prepared by polymerization methods using substantially identical magnesium chloride supported titanium-based catalysts. Consequently, it was concluded that the heat-sealing properties as claimed are inherently possessed by the compositions of the patent.

As to position (2) above, it is submitted that this position is in error as, among other

things, a particular recitation contained in claim 1 has been conveniently ignored. Specifically, recitation (A) of claim 1 which recites a propylene random copolymer produced in the presence of a metallocene catalyst has not been considered. On the other hand, the only catalyst mentioned in the Chatterjee patent is a titanium-containing polymerization catalyst system.

More specifically, it was stated in the outstanding Office Action that the propylene polymer of the Chatterjee patent can be produced using a magnesium chloride supported titanium-based catalyst which is substantially the same as that used in the presently claimed invention. However, it is submitted that this assertion is not supported by the teachings of the subject application.

It is acknowledged that, as set forth in the Action, Production Example 5 of the subject application relates to a propylene polymer (PP5) which is produced using a magnesium chloride supported titanium-based catalyst. However, in Production Example 5, the titanium compound supported on magnesium chloride is titanium tetra-n-butoxide ($\text{Ti}(\text{O}-n\text{-C}_4\text{H}_9)_4$), which is not a metallocene compound. Further, PP5 is used in Comparative Example 10 (see Table 3) which describes results of a control experiment, and the properties of the film produced using PP5 are poor (See Table 4). Therefore, PP5 is not a polypropylene-based resin composition film in accordance with the presently claimed invention.

As apparent from the above, the magnesium chloride supported titanium-based catalyst mentioned in the subject application cannot be used for producing the propylene polymer as a material of the film of the presently claimed invention. Therefore, the film of the presently claimed invention cannot be rendered obvious from the Chatterjee patent.

In addition, it also was stated in the Action that the catalyst taught by the Chatterjee patent generically include a Ziegler-Natta type catalyst and metallocene catalyst. However, as set forth above, the Chatterjee patent only mentions a titanium-containing polymerization catalyst system. There is no description in the Chatterjee patent disclosing or suggesting a metallocene catalyst. Consequently, a person of ordinary skill in the art would be led to believe that a metallocene catalyst is excluded from the catalyst taught by the Chatterjee patent.

For the sake of argument, even if the Chatterjee patent is regarded as suggesting a metallocene catalyst, it cannot be assumed that the propylene polymers produced thereby would satisfy all requirements of the presently claimed invention based only on the suggested use of metallocene catalyst. In support thereof, it is to be emphasized that, according to the presently claimed invention, not all propylene random copolymers produced in the presence of a metallocene catalyst satisfy all of requirements (a-1) to (a-6). For example, although the catalyst used in producing Production Example 8 is a metallocene compound, the resultant propylene polymer (PP8) is used in Comparative

Example 13. In particular, Table 3 describes results of a control experiment, and the properties of the film produced using PP8 are poor as is set forth in Table 4. Thus, the present application clearly demonstrates that requirements (a-1) to (a-6) do not necessarily follow from the production (polymerization) of a propylene polymer with a metallocene catalyst.

Therefore, even if it is assumed that the Chatterjee patent suggests a metallocene catalyst, an assumption not well founded, the use of the metallocene catalyst does not inherently provide a propylene polymer simultaneously satisfying requirements (a-1) to (a-6). As a consequence, a person of ordinary skill in the art would not be led to a propylene polymer useful for producing a metallized film which is produced using a metallocene catalyst and simultaneously satisfies requirements (a-1) to (a-6).

Second, the page from the Declaration accompanying the previously submitted Amendment provided a value of 17[HST] - [YM] for three films made of resin compositions according to the Chatterjee patent (Examples A, D and E) and for a film in accordance with the present invention (Example 1). The values for each film were set forth in the handwritten table at the lower right of the page from the Declaration submitted with the last Amendment.

Again, it is to be noted that amended claim 1 recites that the value of 17[HST] - [YM] should be between 1165 and 1670. The page of the Declaration enclosed with the Amendment indicated that the film of Example A of the Chatterjee patent had a value of 1790; that the film of Example B of the patent had a value of 1752; and that the film of Example C of the patent had a value of 1698. In distinct contrast, the film in accordance with the presently claimed invention and as set forth in Example 1 had a value of 1453. As is readily apparent, the three films according to the patent do not satisfy formula (a), but the film of Example 1 does satisfy the formula. Thus, it is submitted that the information from the Declaration disproves the assertion of the examiner that the heat-sealing properties as claimed are inherently possessed by the compositions of the Chatterjee patent.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) and allowance of claims 1, 3 and 7 over the cited Chatterjee patent are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.


In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit .

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Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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